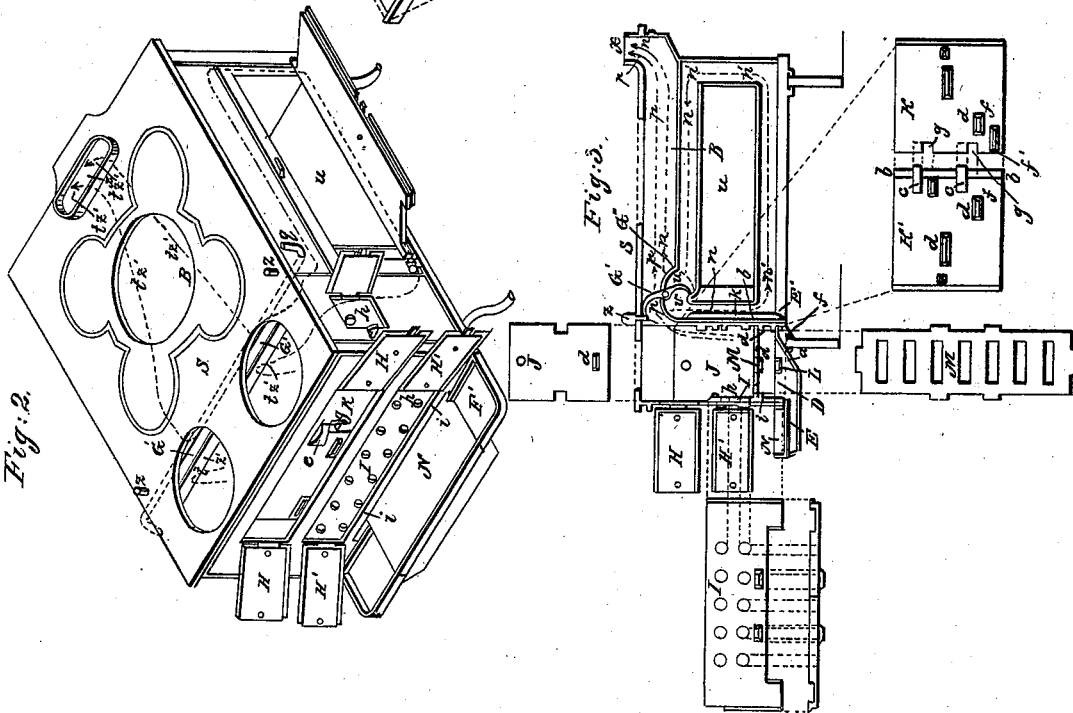
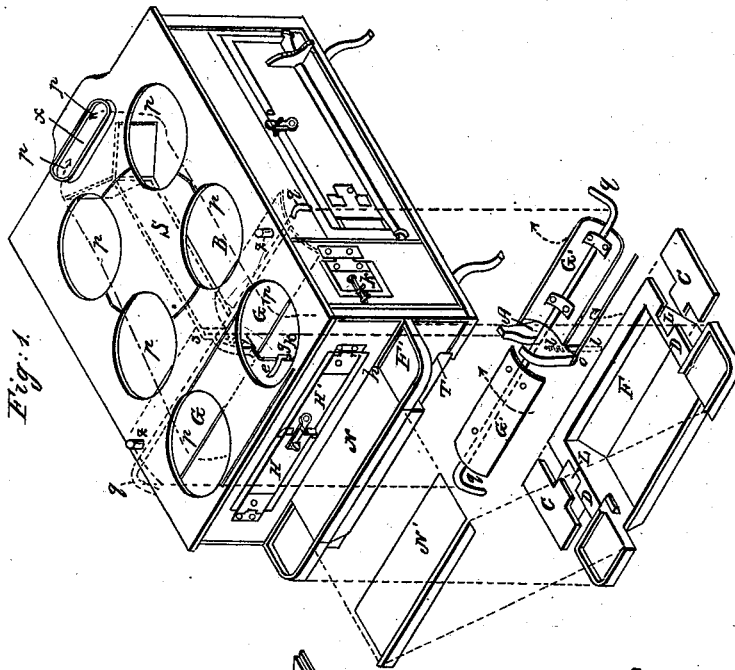


S. & G. J. CONRAD.

Cooking Stove.

No. 4,871.

Patented Dec. 3, 1846.



UNITED STATES PATENT OFFICE.

SAML. CONRAD AND GEO. J. CONRAD, OF BERLIN, PENNSYLVANIA.

COOKING-STOVE.

Specification of Letters Patent No. 4,871, dated December 3, 1846.

To all whom it may concern:

Be it known that we, SAMUEL CONRAD and GEORGE J. CONRAD, of Berlin, in the county of Somerset and State of Pennsylvania, have
5 invented a new and Improved Cooking-Stove; and we do hereby declare that the following is a full and exact description.

The nature of our invention consists in the arrangement of a cooking stove for the use
10 of wood or coal as fuel, simply by removing the shifting bottom (F) from the middle recess (h) to the lower recess (T) of the stove. In changing the shifting bottom (F) in said manner, the stove is also changed
15 from a wood stove to a coal stove, and in using our spherical dampers (G) the two flues (v and w) may be opened or shut alternately by one motion, so as to circulate the fire around the baking oven (U) or to con-
20 duct the same direct under the kettle at p, p and into the chimney (X) (Figure 3).

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation, reference being had to the annexed drawing; making a part of this specification.

The same letters are used on the same parts of the stove in all figures.

Fig. 1, is a perspective view of the stove
30 when used for wood, the shifting bottom (F) being in the upper recess (h). (H H,) two folding doors in the upper part of the stove. (K) the back-fire-plate, visible through the kettle hole, and also (G, G) the
35 spherical dampers, represented as to shut the descending flue (v) and ascending flue (w) (see Fig. 3,) the fire passing direct from the fire place (K) under the kettles and into the chimney (X), as represented
40 by the arrows (p, p, p, etc.), and dotted lines. (A) shown by dotted lines the king post, and (Y) the fire dividing plate between the kettles. (N) the cover of the shifting bottom (F)—(N') the same cover. (F)
45 the shifting bottom by itself, (cover removed,) (D) the side flange, and (L) an opening in the said flange to admit the key (E) to drop in, (when in the lower recess (T) Fig. 1),—and to fit the key (C) when
50 the shifting bottom (F) is placed in the upper recess (h) for the use of burning wood. (G' G') the two spherical dampers by themselves (G'') represents the said flues v and w shut (Fig. 3) and the fire passing
55 direct over the flue (w) and (G) showing the flues thrown open, the fire circulating

around the baking oven (U) Fig. 3. (A) the king-post supporting and dividing the two dampers (G' G')—and supporting the upper plate (S) of the stove. (T) the
60 lower recess—covered by a sheet iron plate.

Fig. 2, the same stove arranged for burning coal, the shifting bottom (F') being removed from the upper recess (h) to the lower recess (T)—and in its place the up-
65 right fire plate (I) is inserted in the recess (h)—the plate (I) having many holes to let air into the fireplace to support combustion—said recess may be closed by two other folding doors (H' H') for the pur-
70 pose to regulate the draft of air if required—the dampers (G' G') are here supposed to be elevated and the flues opened for the circulation of the fire around the baking oven (U) as traced by the dotted lines and
75 arrows (V). (z, z) are two small knobs, for the purpose of arresting and to keep the dampers (G) up, when elevated.

Fig. 3, representing the coal-stove in a longitudinal section. (M) the fire grate. 80 (I) the upright fire plate. (J) side plates. (K) the fire cook-plates with flanges (b), keys (e e), and locks (g, g). (G'') painted red, represents the spherical damper elevated, and kept fastened in that position by
85 the knob (z) the arrows (n, n, &c.), showing the flues through which the fire has to pass around the baking oven (u) in such a case. (G') painted yellow, showing the spherical damper when depressed and shut up the
90 flues (v and w) and only the single flue (p, p) is opened for the direct passage of the fire from the fire place (J) to under the kettle and into the chimney (x) as shown by the arrows and dotted lines (p, p, p, &c.)
95 The parts (I, M, J, and K,) are withdrawn and shown single by themselves for better illustration.

To explain the particular combination and connections of the single parts of said stove
100 it will be necessary to make the following repetition in describing them. For the use to burn coal in said stove, the front has four folding doors (H, Fig. 2), the two lower ones covering the upper recess (h); a grate
105 (I) in front standing upright; another grate (M) lying horizontally upon bearings (d); two outside plates (J) for securing the outer plates of the stove from the action of the fire (when coal is used); the plate (K) is in
110 two parts. The one has an upright flange (b) on the back of the plate, which serves

for two purposes—it forms a defense against the pressing back of the plate when hot, as it rests against the oven; it also forms the back locks (*e*) for keeping up the other part (K).
 5 In front are three bearings (*f f f*) for shifting bottom (F) to rest between and two locks (*e e*) on the same piece with the flange. The other back piece (K) has two small openings (*g g*) for the locks (*e e*) to pass
 10 through, so that in placing them in the one (K') with the lock (*e e*) is put first in its place, and then the other (K) is placed in and raised until the locks (*e e*) pass through the openings (*g g*) and let drop; the object
 15 of having it in two pieces is for the purpose of placing or removing it without taking the stove apart.

It has been mentioned before the shifting bottom (F) is used in the upper recess (*h*)
 20 to burn wood, and when shifted below at (T) for coal when the grates (M) and (I) and the side plates (J, Fig. 3) remain as before stated, the lock or recess in the flange (D) is dropped over a stationary key (E)
 25 of the extreme bottom (E') which secures it to its place and another lock (*f'*) on the back plates (K' K) which keeps it down to its place, as represented at Fig. 3. For burning wood the doors H' H' and grates
 30 (I and M) are taken out, the shifting bottom (F) is introduced in the upper recess (*h*); the lower cross bar (*i i*, Fig. 2) of the stove in front serves as a bearing under the bottom (F, Fig. 1) and two keys (*c c*) are placed,
 35 one in each side and drop in locks (L L) of the bottom at (D D), which finishes the entire fireplace for wood, in which case the side door (*h*) is used (see Fig. 1).

The kingpost (A) is so constructed as to
 40 serve for several purposes. First, it secures the oven together in front by a rod (*l*) or screw running down from the post through the oven and with a bar beneath screws it firmly together; secondly, it is the bearing

for the dampers (G); thirdly, it has a 45 notch (*o*) behind to receive the top flue plate so as to regulate it with the dampers and prevent it from coming in contact with both the dampers; fourthly, it serves as a bearing to the top plate (S) to rest on so that when 50 the top becomes hot it cannot sink, which is the case in many stoves of a similar kind.

(G' G')—The dampers have been also described above, but in addition it may be remarked that they rest with a bearing in the 55 center of the king-post (A); at the other extremity is a handle or lever (*g*) on the outside of the stove for the purpose of turning them open, or to shut, when they are opened for the purpose for baking or driving the fire 60 around the oven, no heat is lost for boiling service on the back part of the stove, which we believe no other stove now in use performs the same saving operation. The dampers (G' G') are placed in front and 65 just above the front oven plate, so that when closing the flue (*p p*) and passing around with the damper it drops on the back fireplate and forming a complete flue (*n n n* &c., see Fig. 3). The damper also forms the 70 regulation of heat on the oven for if the oven becomes too hot the one damper may be let down and cause a less heat to pass around the oven.

What we claim as our joint invention and 75 desire to secure by Letters Patent, is—

1. We claim the combined mode of locking the back-plate (K) as described and represented in the drawings, Fig. 3.

2. We claim the arrangement of the dam- 80 pers G' G' in combination with the flues (*p*) and (*n*) as set forth in the specification and illustrated by the drawings.

SAMUEL CONRAD.
 GEORGE J. CONRAD.

Witnesses:

CHARLES ATCHESON,
 JOHN BARNES.